

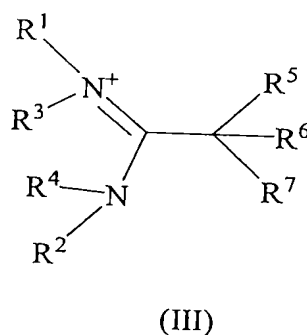
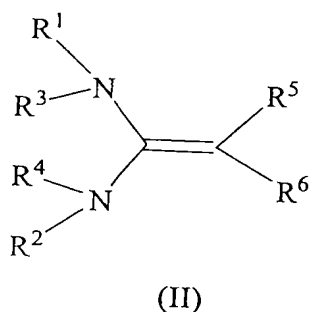
### **Claim Amendments**

This listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of Claims**

Claim 1. (Currently Amended) A process, comprising:

reacting a compound of a metal of groups 6 to 10 of the Periodic Table of the Elements with a compound of the formula II and/or III

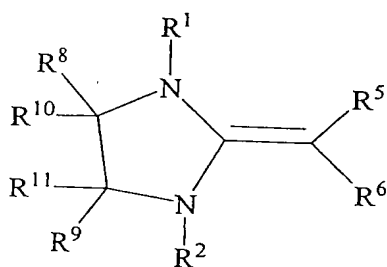


wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  are the same or different and each is a linear, branched, substituted or unsubstituted, cyclic or alicyclic alkyl group having from 1 to 24 carbon atoms; a substituted or unsubstituted, mono- or polycyclic aryl group having from 6 to 24 carbon atoms; a mono- or polycyclic, substituted or unsubstituted heterocycle having from 2 to 24 carbon atoms; a heteroatom selected from the group consisting of N, O and S, and  $R^3$  and  $R^4$  optionally are linked by a covalent bond;

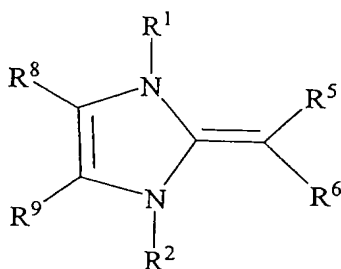
$R^5$ ,  $R^6$  and  $R^7$  are optionally the same or different and each is H, a linear, branched, substituted or unsubstituted, cyclic or alicyclic alkyl group having from 1 to 24 carbon atoms; a substituted or unsubstituted, mono- or polycyclic aryl group having from 6 to 24 carbon atoms, thereby forming a complex of said metal selected from groups 6-10 of the Periodic

Table with said compound of formula (II) or (III), ~~with the proviso that the R<sup>7</sup> substituent is not H, and~~ with the proviso that when groups R<sup>3</sup> and R<sup>4</sup> in formula (III) are bonded together to form an imidazole ring, the metal of the metal compound reactant can not be a member of group 10.

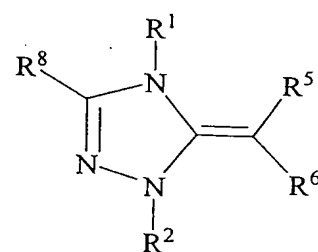
Claim 2. (Previously Presented) The process as claimed in claim 1, wherein the compounds of ~~formulae II or III are compounds within the scope of~~ formulae (V) to (X) as follows:



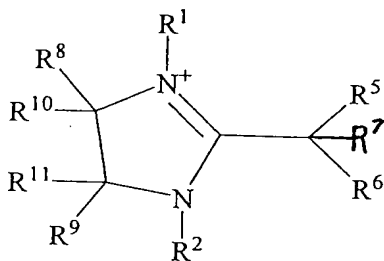
V



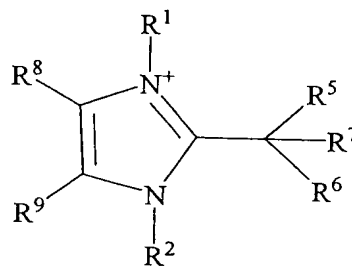
VI



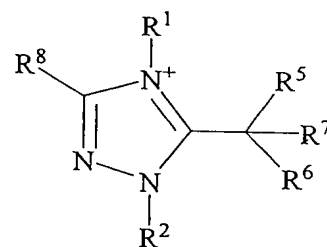
VII



VIII



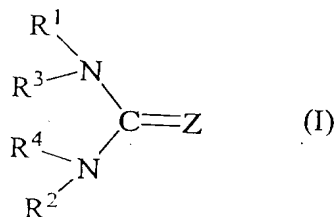
IX



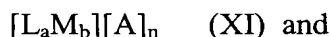
X

wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> are each as defined above and R<sup>8</sup>, R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> are the same or different and are each H or have one of the definitions of R<sup>1</sup>, are compound embodiments within the scope of formulas (II) and (III).

Claim 3. (Previously Presented) The process as claimed in claim 1, wherein the product of the reaction is a metal complex of formula (I)



in which [Z] is a metal complex fragment of the formula:



M is a metal of groups 6 to 10 of the Periodic Table of the Elements;

L is one or more identical or different mono- or polydentate, charged or uncharged ligands;

A is a singly charged anion or the chemical equivalent of a multiply charged anion;

b is an integer from 1 to 3;

a is an integer from 0 to 5 x b;

n is an integer from 0 to 6;

and  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  are each defined as specified.

Claim 4. (Previously Presented) The process as claimed in claim 3, wherein L in formula (XI) is hydrogen, the hydrogen ion, halogens, halogen ions, pseudohalides, carboxylate ions, sulfonate ions, amide radicals, alkyl groups, alkylaryl groups, aryl groups, heteroaryl groups, alkenyl groups, alkoxide radicals, nitriles, isonitriles, mono- or diolefins, alkynes,  $\pi$ -aromatic radicals, cyclopentadienyl, indenyl, phosphines, phosphates, phosphinites, phosphonites, phosphorus aromatics, acetylacetonate, carbon monoxide, nitrogen monoxide or carbene ligands, where the alkyl groups contain from 1 to 24 carbon

atoms, the alkenyl and heteroaryl groups from 2 to 24 carbon atoms, and the aryl and alkylaryl groups from 5 to 24 carbon atoms, and optionally are each substituted or unsubstituted.

Claim 5. (Previously Presented) The process as claimed in claim 3, wherein A in formula (XI) is halide, pseudohalide, tetraphenylborate, tetrafluoroborate, tetrachloroborate, hexafluorophosphate, hexafluoroantimonate, tetracarbonylcobaltate, hexafluoroferrate, tetrachloroferrate, tetrachloroaluminate, triflate, bistrifluorosulfonylamide, heptachlorodialuminate, tetrachloropalladate, sulfate, hydrogensulfate, nitrate, nitrite, phosphate, hydrogenphosphate, dihydrogenphosphate, hydroxide, carbonate, hydrogencarbonate, salts of aromatic or aliphatic carboxylic acids, salts of aromatic or aliphatic sulfonic acids or phenoxides.

Claim 6. (Previously Presented) The process as claimed in claim 1, wherein the metal of groups 6 to 10 of the Periodic Table is Ru, Rh, Ni, Pd, or Pt.

Claim 7. (Canceled)

Claim 8. (Previously Presented) The process as claimed in claim 1, wherein one or more embodiments of the compounds of formulas II and/or III is reacted with said metal in a ratio ranging from 1 to 100 mol amount to the metal of groups 6 to 10 of the Periodic Table.

Claims 9 and 10. (Canceled)

Claim 11. (Currently Amended) A method of telomerization, comprising:

reacting an ~~olefinic material~~ olefin with a nucleophile in the presence of a catalyst which is the ~~reaction product~~ metal complex of Claim 1.

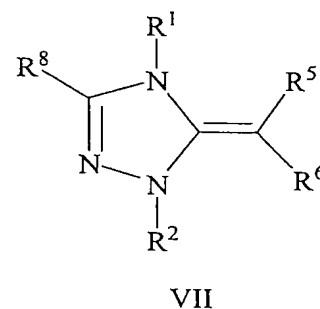
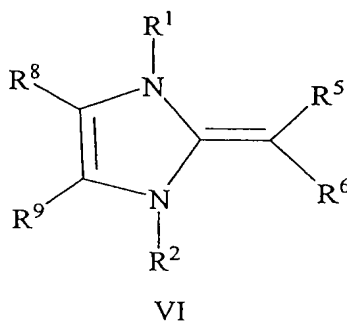
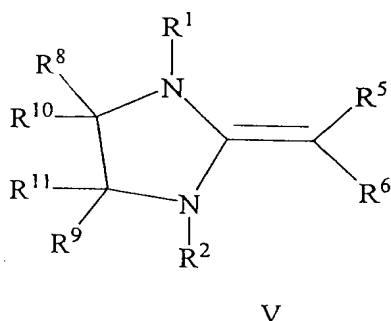
Claim 12. (Currently Amended) The method of Claim 11, wherein said olefin ~~the olefinic material~~ is a conjugated diolefin and the nucleophile is an aliphatic alcohol.

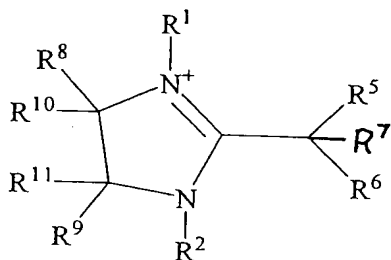
Claim 13. (Previously Presented) A method, comprising:

conducting a hydroformylation, a hydrogenation, an aryl amination, a hydrosilylation, a Heck reaction, a Suzuki coupling, a Kumada coupling, a Stille coupling, a Miyaura coupling, a Sonogashira coupling, an olefin metathesis, a cyclopropanation, a reduction of a haloarene or a polymerization reaction in the presence of a catalyst of a metal complex (I) that is comprised of one or more compounds of formula II and/or III as prepared by the method of Claim 1.

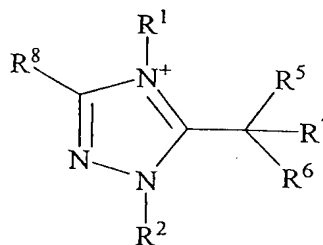
Claim 14. (Previously Presented) A process, comprising:

reacting a compound of a metal of groups 6 to 10 of the Periodic Table of the Elements with a compound of the formula V to VIII and/or X





VIII



X

wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  are the same or different and each is a linear, branched, substituted or unsubstituted, cyclic or alicyclic alkyl group having from 1 to 24 carbon atoms; a substituted or unsubstituted, mono- or polycyclic aryl group having from 6 to 24 carbon atoms; a mono- or polycyclic, substituted or unsubstituted heterocycle having from 2 to 24 carbon atoms; a heteroatom selected from the group consisting of N, O and S, and  $R^3$  and  $R^4$  optionally are linked by a covalent bond;

$R^5$ ,  $R^6$  and  $R^7$  are optionally the same or different and each is H, a linear, branched, substituted or unsubstituted, cyclic or alicyclic alkyl group having from 1 to 24 carbon atoms; a substituted or unsubstituted, mono- or polycyclic aryl group having from 6 to 24 carbon atoms.